

Draft
Virginia Cave Board
Saturday, January 20, 2007
Grand Caverns, Grottoes, Virginia

Virginia Cave Board Members Present

Mr. Tom Lera, Chairman
Ms Andrea Futrell, Vice Chairman
Dr. David C. Culver
Mr. Andrew Harrison
Dr. John R. Holsinger
Ms. Babs Melton
Ms. Judy Molnar
Ms. Barbara L. Moss
Mr. Jesse Richardson
Mr. David Socky
Mr. Roger Kirchen, Virginia Department of Historical Resources representative

Virginia Cave Board Members Not Present

Ms. Claire Ward

DCR Staff Present

Mr. Joey Fagan
Mr. Josh Rubenstein
Mr. Larry Smith
Ms. Carol Zokaites

Others Present

Mr. Scott Davis
Mr. Rod Graves
Mr. Rick Lambert
Ms. Charlotte Lucas
Mr. Phil Lucas
Mr. Gary Moss

Call to Order

Mr. Tom Lera called the meeting to order at 12:55 p.m. and declared a quorum present.

Introduction and Announcements

Mr. Lera welcomed members, staff, and guests.

Approval of Minutes from September 16, 2006

MOTION: Ms. Barbara Moss moved that the minutes of the September 16, 2006 meeting of the Virginia Cave Board be approved as corrected.

SECOND: Ms. Babs Melton seconded

DISCUSSION: None.

VOTE: Motion carried unanimously.

Treasury Report

Mr. Larry Smith reported that there is \$1869.99 in the Cave Board treasury.

Virginia Speleological Survey Presentation

Mr. Phil Lucas presented an overview of the Virginia Speleological Survey (VSS) and the database it maintains on Virginias caves. The VSS, established in 1974, has reports on 4367 caves in Virginia as well as 3217 karst springs. The VSS owns a computer database that contains a wealth of information about Virginia's caves. There are 1959 cave maps in the files of the VSS, with some caves having been surveyed more than once. The VSS maintains a growing list of Significant Caves at the direction of the Cave Board. Under a data sharing agreement between the organizations, the database is consulted by the DCR Division of Natural Heritage for State Environmental Review inquiries and by the DCR Natural Heritage Karst Program. Mr. Lucas introduced Mr. Rick Lambert, the new president of the VSS. The VSS website is posted at www.virginiacaves.org.

Old Business

Education and Outreach Committee

Ms. Barbara Moss circulated draft copies of the upcoming Cave Owner's Newsletter to the Board. A discussion was held regarding content and frequency of the newsletter. It was decided that the Cave Owner's Newsletter should be published twice a year and would contain a mixture of general interest and technical articles. The next issue will be published in March 2007.

The Board is seeking grants to fund the cost of printing and distributing the Cave Owner's Newsletter. Mr. Andrew Harrison will make organizational contacts to seek funds.

Ms. Moss will coordinate updates to the Cave Board webpage. Possible updates and additions to content for the webpage were discussed. Possible content includes posting past issues of the Cave Owner's Newsletter, fact sheets and technical papers, a State Bat informational page, and information on Virginia Cave Week.

Virginia Cave Week was discussed including when is the best time to observe the event, producing resources for teacher packets at show caves, connections to "Meaningful Watershed Experience" and Virginia Standards of Learning, activities at show caves, and appropriate scale of the event. It was decided that no official Virginia Cave Week would be observed in 2007, but will likely be held again in the future. Teacher packets will continue to be available.

Mr. Lera noted that show caves continue to request Virginia Cave Law signs.

Ms. Carol Zokaites circulated an informational sheet outlining available karst and groundwater education materials posted on the DCR Karst Webpage as well as contact information for the Karst Education Coordinator.

Joint Technical Committee

Ms. Andrea Futrell reported on and praised the DCR Karst Program's "Managing Stormwater in Virginia's Karst Region" intra-agency workshop, held December 7 – 8, 2006 at Radford Virginia.

Ms. Futrell gave an update on progress of the DCR Stormwater Technical Advisory Committee (TAC). DCR is rewriting stormwater regulations. She described the letter being written to express the Cave Board position regarding the proposed revisions to Virginia's stormwater regulations and ways the rules can be crafted to better protect the Commonwealth's sensitive cave and karst resources. Ms. Futrell and other Cave Board members are following the revision process; she discussed plans to attend future meetings of the DCR Stormwater TAC.

Ms. Futrell discussed plans for a stakeholders meeting to discuss karst-related issues and concerns in Rye Cove in Scott County, Virginia. She asked for assistance from other Board members in organizing the event and in making contacts with area residents and government officials and planners to arrange for the meeting. Natural Tunnel State Park was mentioned as a likely location for the event.

Virginia DCR Natural Heritage Karst Program and Karst Education Report

Ms. Zokaites and Mr. Joey Fagan circulated the following written report on the activities of the DCR Karst Program to the Board:

Technical Assistance:

Revision of stormwater regulations continues. Use of appropriate best management

practices for stormwater management in karst is incorporated into regulations. DCR Division of Soil and Water Conservation staff has submitted proposed draft regulations to EPA and the Center for Watershed Protection for review.

Comments continue to be provided to the Virginia Outdoors Foundation on properties under consideration for conservation easements. Virginia's largest conservation easement to date was recorded on a several thousand-acre property in Tazewell County that includes several biologically significant caves, including one of the more significant localities of the Virginia Big-eared Bat. Staff is following up with the landowners to pursue installation of best management practices on the property, emphasizing cattle exclusion from sinkholes and sinking streams. Easements were placed on other properties with significant caves as well.

Karst program staff is working to promote the Virginia Agricultural Best Management Practice (BMP) WQ-11, Agricultural Sinkhole Protection, through demonstration projects in each of Virginia's major karst watersheds. After significant negotiation by the karst program staff, the BMP program management decided that caver volunteer time could indeed count toward the landowner's portion of the project cost, which is rated as 25% of total project cost for this BMP.

Staff continues to work closely with the Virginia Speleological Survey (VSS) to review development projects for potential impacts to karst resources.

Staff held a workshop entitled *Managing Stormwater in Virginia's Karst* for DCR's Urban Programs staff working in the western half of the state. Thirteen DCR staff and Andrea Futrell of the Virginia Cave Board attended the 2-day workshop and field trip, which facilitated discussions between participants of the technical and other challenges they face while managing stormwater runoff in environmentally challenging karst areas.

Staff participated in a two-day informal workshop with USGS and DEQ personnel to discuss existing data, conceptual models, and research needs associated with the Great Valley karst aquifer.

The high density, active adult community portion of a proposed development north of Harrisonburg was abandoned due to concerns raised by Rockingham County and Karst Program staff over the appropriateness of such a development on a sinkhole plain.

Education and Outreach:

Staff led a trip to the Clover Hollow Natural Area Preserve (Stay High Cave) at the fall 2006 Meeting of the Virginia Region (VAR) of the National Speleological Society.

Staff presented an update to the significant cave list at the annual meeting of the Virginia Speleological Survey (VSS).

Staff attended the National Cave and Karst Conservancies Forum in Lewisburg, WV in September, 2006.

Project Underground workshops – Since the last report, 4 Project Underground workshops were held reaching 59 participants. 15 workshops were held in 2006. Several facilitators helped with these workshops.

Staff attended the Virginia Environmental Education Conference on Sept. 19-20, giving a presentation entitled “Bats and Cave Critters”.

Staff provided materials to Daniel Boone Soil and Water Conservation District Educators to prepare bulletin board displays about karst in 14 Lee county schools.

Staff assisted with field trip and other activities at naturalist group meeting at a local landowner’s cave in Botetourt County.

The karst groundwater model was presented to 14 girl scouts at a scouting event in Roanoke in October.

Staff presented a talk on karst and associated biodiversity at Virginia Society of Naturalists in Charlottesville.

Staff promoted Project Underground at southwest regional Soil and Water Conservation District (SWCD) education meeting.

Staff presented a karst talk for Jesse Richardson’s Urban Affairs course at Virginia Tech.

Staff attended the Virginia Science Educators Leadership Association (VSELA) meeting in November.

Staff attended the Virginia Association of Science Teachers (VAST) meeting, Nov. 16-18, delivering a presentation on Bats and Cave Critters and manning the DCR education display featuring the VA State Bat.

Staff conducted an informal, day-long field trip for Virginia Tech staff concerned with the challenges of managing stormwater in karst, highlighting the most pressing needs for research and engineering solutions.

Data Development:

Josh Rubinstein and Bill Balfour continue working as part-time karst protection assistants. The conservation site report was updated and submitted to CCV incorporating new cave conservation sites and site biodiversity rankings.

CCV awarded a new grant to DCR's Karst Program for completion of preliminary cave conservation site boundaries for significant caves. This work is to be completed by December 31, 2007.

Inventory work continues by Karst Program and Natural Heritage Inventory staff to determine the distribution of the Madison Cave Isopod (*Antrolana lira*) and associated stygobitic invertebrates in the Shenandoah Valley. Staff is assisting American University graduate student Ben Hutchens in obtaining specimens of *Antrolana lira* for genetic diversity analysis.

Hydrological studies are ongoing in the Rye Cove area of Scott County, building upon work performed in the 1960's by Virginia Cave Board member John Holsinger. Studies have revealed a larger than heretofore believed watershed for critical habitat of the Rye Cove Cave Isopod (*Lirceus culveri*), a species restricted to the watershed of a single karst spring.

Natural Areas Protection:

The Nature Conservancy (TNC) purchased a 118-acre tract in Frederick County that includes the entrance to Ogden's Cave and lands above the cave passages. Ogden's Cave is a cave of global biodiversity significance and the longest cave in Frederick County. TNC will sell this property to the Department of Conservation and Recreation for management as a natural area preserve.

Grant funding is being sought for additional cave properties that are globally significant in terms of biodiversity, one in the Shenandoah Valley, and the other is in the Powell River Basin. See Other New Business, below.

Best Management Practices and Cost-Share Programs for Karst Protection

Mr. Fagan summarized the main features of the Virginia Agricultural Sinkhole Protection BMP (WQ-11). The WQ-11 cost-share reimburses 75% of landowner expenses, up to \$2,500 for debris removal from sinkhole dumps. The practice also includes the fencing of a sinkhole in order to exclude livestock. DCR Karst Program staff has worked with DCR Division of Soil and Water staff to confirm that volunteer labor can count toward the landowner's share of the project cost, which is rated as 25% of total project cost for this BMP.

The Conservation Reserve Enhancement Program (CREP) can also protect sinkholes that receive perennial or intermittent flow from a stream. CREP pays a portion of the cost to construct fencing for livestock exclusion and to establish wooded buffers along streams and sinkholes that receive the flow from a stream. CREP also pays an annual rental to the landowner to compensate him for establishing and maintaining that portion of property in reserve for conservation purposes.

Landowners who are interested in applying for these or other cost-share BMPs or conservation programs should contact their local Virginia Soil and Water Conservation District (SWCD) or the Natural Resources Conservation Service.

Rufe Caldwell's Cave Sinkhole Cleanout

Mr. Fagan reported that DCR Karst Program staff is working with Mountain Castles SWCD and Mary Sue Socky and Marian McConnell of the Blue Ridge Grotto to make arrangements with the owner to have waste debris removed and the sinkhole fenced to exclude cattle under the WQ-11 BMP cost-share. The old sinkhole dump impacts Rufe Caldwell's Cave, one of Virginia's Significant Caves, as well as groundwater resources in the vicinity. It is hoped that volunteer labor provided by cavers from the Blue Ridge Grotto, the VPI Cave Club, and the Virginia Region of the National Speleological Society can be used to offset much of the landowners out of pocket expenses for the project.

Saltpetre Cave in Botetourt County

Mr. David Socky reported on a proposed 42-lot development on 238 acres in Botetourt County proximal to Perrys Saltpetre Cave, a significant cave in Botetourt County. Mr. Socky was contacted by a local resident expressing concern about the project. Mr. Wil Orndorff of the DCR Karst Program attended the January 8, 2007 meeting of the Botetourt County Planning Commission where he expressed concerns regarding the ability of the thin soils on the heavily karsted site to adequately support the number of septic systems proposed for the development. The Botetourt County Planning Commission denied approval of the preliminary subdivision plat for the proposed development.

Rye Cove Hydrology

Ms. Futrell circulated a map detailing recent hydrologic studies by the DCR Karst Program in Rye Cove in Scott County. Dr. John Holsinger provided a summary of past and current hydrologic investigations in the area. He voiced concern about the potential for groundwater pollution at Bishoptown. He noted the significance of the Rye Cove Karst Area and the need to protect this unique area. Dr. Holsinger called for further studies of the hydrology and cave systems in Rye Cove.

Grand Caverns

Mr. Larry Smith reported that the DCR Division of State Parks favors transferring Grand Caverns from the Upper Valley Regional Park Authority to the Commonwealth of Virginia to be part of the State Park System. The Division of State Parks, however, requires additional funds in order to acquire additional lands, upgrade facilities, hire staff and operate a new state park.

New Business

Luray Caverns

Mr. Rod Graves, Vice President of the Luray Caverns Corporation made a presentation to the Cave Board regarding the Luray Landing housing development. The proposed subdivision involves 410 units on approximately 90 acres. Mr. Graves is concerned about the environmental impacts as well as possible negative economic impacts to the community as a result of the proposed development. There is concern that blasting associated with the project could cause damage to Luray Caverns. He cited problems similar to those observed by Ms. Babs Melton at Crystal Caverns as a result of blasting by developers. Other issues of concern include potential problems due to improper management of stormwater and to contamination by sewage. Mr. Graves stated the need for legislation to better protect caves such as Luray Caverns and Crystal Caverns and to prevent physical damage to significant caves and natural springs due to blasting or other construction activities.

Endless Caverns

Mr. Josh Rubenstein reported on plans by the new owners of Endless Caverns to develop a 450-site recreational vehicle park, water park, miniature golf course, and museum. Mr. Orndorff had sent an e-mail to the Rockingham County Board of Supervisors on January 17, 2007, expressing concern about possible impacts on the cave and karst ecosystem from the proposed development. In his e-mail he offered assistance from the DCR Karst Program to Rockingham County to evaluate mitigation strategies that might be proposed by the developer. He encouraged the county to subscribe to the environmental review services available through the DCR Natural Heritage Division. There is local opposition to the proposed development.

Strategic Planning

This item will be discussed at the next Cave Board meeting.

Forum to Discuss Protection Strategies for Cave and Karst Resources in Virginia

Ms. Futrell suggested four general categories for discussion:

1. Workshops with an Education Focus – such as Growing Communities on Karst
2. Discussions with planners, local and community leaders about strategies to better protect cave and karst resources.
3. Discussions with Regional Cave Conservancy groups to better integrate efforts to achieve shared goals.
4. Rye Cove stakeholders forum (as noted above).

This item will be further discussed at the next Cave Board meeting.

Other New Business

At the request of The Nature Conservancy (TNC), Dr. Holsinger offered to write for the Cave Board a letter to the Virginia Land Conservation Foundation and to the US Fish and Wildlife Service, expressing support for TNC's funding proposal for the purchase of the Surgener-Gallohan Cave system in Lee County, Virginia.

Mr. Larry Smith asked the Board for a letter of endorsement to the US Fish and Wildlife Service expressing in support of efforts to acquire Madisons Cave and surrounding property for inclusion in the Virginia DCR Natural Area Preserve System. Mr. Lera indicated that the letters could be sent.

Public comments

The Virginia Living Museum is hosting the Smithsonian Institution's Traveling Exhibit, "Caves a Fragile Wilderness" from February 3 through April 1, 2007 (www.thevlm.org).

On September 12-15, 2007, the Second Appalachian Karst Symposium will be held at East Tennessee University in Johnson City, Tennessee (www.etsu.edu/physics/appkarst).

Mr. Jesse Richardson is planning a "Growing Communities on Karst" workshop to be held on May 23, 2007 at Winchester Virginia (www.uap.vt.edu/karst/index.htm).

Thanks to Grand Caverns for Hosting

Mr. Lera expressed thanks, on behalf of the Virginia Cave Board, to Grand Caverns and the Upper Valley Regional Parks Authority for hosting this meeting of the Board

Dates for Future Cave Board Meeting

- March 24, 2007 at Grand Caverns Grottoes, Virginia
- September 21 –22, 2007 at Natural Tunnel State Park, Duffield, Virginia
- November 3, 2007 at Luray Caverns, Luray, Virginia

Adjournment

Mr. Lera adjourned the meeting at 3:30 PM.

Respectfully submitted,

Thomas Lera
Board Chairman

Joseph H. Fagan
Secretary